

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

1. (Previously Presented) An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, or a complement thereof.
- 2-3. (Canceled)
4. (Previously Presented) An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2.
5. (Currently Amended) An isolated nucleic acid molecule which ~~encodes a naturally occurring allelic variant of a *Corynebacterium glutamicum* polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the nucleic acid molecule~~ hybridizes to the complement of a nucleic acid molecule consisting of SEQ ID NO:1, in 6X SSC at 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C, and wherein said nucleic acid molecule encodes a polypeptide having 6-phosphogluconolactonase activity.
6. (Previously Presented) An isolated nucleic acid molecule comprising a nucleotide sequence which has at least 90% identity with the nucleotide sequence of SEQ ID NO:1, wherein said nucleic acid molecule encodes a polypeptide having 6-phosphogluconolactonase activity, or the complement thereof.
- 7-8. (Canceled)
9. (Previously Presented) An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 1 and 4-6 and a nucleotide sequence encoding a heterologous polypeptide.
10. (Original) A vector comprising the nucleic acid molecule of claim 1.

11. (Original) The vector of claim 10, which is an expression vector.
12. (Currently Amended) A host cell ~~transfected~~ transformed with the expression vector of claim 11.
13. (Original) The host cell of claim 12, wherein said cell is a microorganism.
14. (Original) The host cell of claim 13, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.
- 15-16. (Canceled)
17. (Currently Amended) A method of producing a polypeptide encoded by an expression vector comprising the nucleic acid molecule of any one of claims 1 and 4-6, comprising culturing ~~[[the]]a host cell of claim 12~~transformed with said vector in an appropriate culture medium to, thereby, produce the polypeptide.
18. (Withdrawn) An isolated SMP polypeptide from *Corynebacterium glutamicum*, or a portion thereof.
19. (Withdrawn) The polypeptide of claim 18, wherein said polypeptide is involved in the production of a fine chemical.
20. (Withdrawn) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of those sequences set forth in Appendix B, provided that the amino acid sequence is not encoded by any of the F-designated genes set forth in Table 1.
21. (Withdrawn) An isolated polypeptide comprising a naturally occurring allelic variant of a polypeptide comprising an amino acid sequence selected from the group consisting of those sequences set forth in Appendix B, or a portion thereof, provided that the amino acid sequence is not encoded by any of the F-designated genes set forth in Table 1.

22. (Withdrawn) The isolated polypeptide of claim 18, further comprising heterologous amino acid sequences.

23. (Withdrawn) An isolated polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 50% homologous to a nucleic acid selected from the group consisting of those sequences set forth in Appendix A, provided that the nucleic acid molecule does not consist of any of the F-designated nucleic acid molecules set forth in Table 1.

24. (Withdrawn) An isolated polypeptide comprising an amino acid sequence which is at least 50% homologous to an amino acid sequence selected from the group consisting of those sequences set forth in Appendix B, provided that the amino acid sequence is not encoded by any of the F-designated genes set forth in Table 1.

25. (Original) A method for producing a fine chemical, comprising culturing a cell containing a vector of claim 11 such that the fine chemical is produced.

26. (Original) The method of claim 25, wherein said method further comprises the step of recovering the fine chemical from said culture.

27. (Original) The method of claim 25, wherein said method further comprises the step of transfecting said cell with the vector of claim 11 to result in a cell containing said vector.

28. (Original) The method of claim 25, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

29. (Previously Presented) The method of claim 25, wherein said cell is selected from the group consisting of: *Corynebacterium glutamicum*, *Corynebacterium herculis*, *Corynebacterium lilium*, *Corynebacterium acetoacidophilum*, *Corynebacterium acetoglutamicum*, *Corynebacterium acetophilum*, *Corynebacterium ammoniagenes*, *Corynebacterium fujiokense*, *Corynebacterium nitrilophilus*, *Brevibacterium ammoniagenes*, *Brevibacterium flavum*, *Brevibacterium ketosoreductum*, *Brevibacterium linens*, *Brevibacterium parafinoliticum*, and those strains set forth in Table 3.

30. (Canceled)

31. (Original) The method of claim 25, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

32. (Original) The method of claim 25, wherein said fine chemical is an amino acid.

33. (Original) The method of claim 32, wherein said amino acid is drawn from the group consisting of: lysine, glutamate, glutamine, alanine, aspartate, glycine, serine, threonine, methionine, cysteine, valine, leucine, isoleucine, arginine, proline, histidine, tyrosine, phenylalanine, and tryptophan.

34-38. (Canceled)

39. (New) The isolated nucleic acid molecule of claim 6, wherein the nucleotide sequence has at least 95% identity to the nucleotide sequence of SEQ ID NO:1.